



GOLD COAST COLONY

REPORT
ON THE
MEDICAL DEPARTMENT
FOR THE YEAR
1947

GOLD COAST

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Annual Medical Report for the Year 1947.

I—PUBLIC HEALTH

(I) SUMMARY OF IMPORTANT EVENTS

The services of the Department were again curtailed by lack of staff, though the shortage was less acute than in 1946. There was no further closing of hospitals, but it was found necessary to withdraw the doctor from Nsawam Hospital. On the other hand, a general improvement in the supply of nurses, and the employment of candidates under test, enabled several stations to provide additional services, as well as permitting the introduction of the 48-hour working week. At the Gold Coast Hospital, however, owing to the lack of Nursing Sisters, it was still necessary for some senior members of the African Nursing Staff to carry out certain duties of Nursing Sisters.

A problem brought to light by the recruitment of additional doctors was a shortage of houses.

The Department was fortunate in obtaining large stocks of military medical supplies at greatly reduced prices. The position as regards supplies was generally satisfactory, though prices again increased and there were some delays.

2. *Staff Changes*.—During the year the following staff changes occurred: Dr. N. C. Macleod, O.B.E., Deputy Director of Health Services, Hong Kong, was promoted to fill the vacant post of Deputy Director of Medical Services. Dr. H. J. Bermingham, Medical Officer, was promoted to the post of Assistant Director of Medical Services. Miss A. C. Belton, Nursing Sister, and Miss M. Gray, Nursing Sister, were promoted to be Senior Nursing Sisters. Miss N. K. Hern, Nursing Sister, was promoted to be Sister Tutor, Maternity Hospital. A Government Chemist, four Nursing Sisters and one Health Nursing Sister resigned their appointments.

3. *Retirements*.—The following officers retired or proceeded on leave prior to retirement: Dr. W. J. McClintock, Assistant Director of Medical Services; Drs. G. L. Alexander, W. S. Thomas, A. J. Murray, R. A. Allen and A. MacPherson, Medical Officers; Drs. H. S. Townsend and J. Oliphant, Senior Health Officers; and Dr. M. C. Chappel, Woman Medical Officer. One Medical Officer and one Nursing Sister were invalided out of the service.

4. *Appointments*.—Newly appointed officers comprised four Medical Officers, four Medical Officers of Health, one House Surgeon, one Woman Medical Officer, one Medical Officer and one Lay Assistant for Leprosy Survey, 16 Nursing Sisters, one Radiographer, one Sanitary Superintendent, one Reclamation Officer, one English Mistress for the Nurses' Training College, two Laboratory Assistants and a Chief Accountant and Executive Officer.

5. *Study Leave*.—The following Medical Officers were granted study leave in the United Kingdom: Drs. W. R. Phillips and G. Watt for the purpose of obtaining the diploma of Fellowship of the Royal College of Surgeons; Dr. B. B. Waddy to take a course of instruction for the diploma in Public Health; and Dr. D. B. George to take a post-graduate course in Obstetrics and Gynaecology. Two Nursing Sisters were given permission to complete their course of study in midwifery in the United Kingdom.

6. *Scholarships and Examinations*.—Six Medical Scholars and two Dental Scholars went to the United Kingdom during the year. There were at the end of the year 23 Government Medical Scholars and five Government Dental Scholars in the United Kingdom. In addition, one Government Medical Scholar and one Government Dental Scholar who had qualified were still in the United Kingdom and were self-supporting.

During the year 16 students—eight Government and eight private—passed the Druggists' Examination. One student was awarded a Nuffield Scholarship and went to the United Kingdom to take an Honours degree in Pharmacy.

Nine Second Division Nurses—five male and four female—passed the Certificate of Nursing Examination. Sixteen Pupil Midwives were successful at the examination for the Certificate of the Midwives Board, and ten of these were appointed Government Midwives. The number of Pupil Nurses who qualified as Second Division Nurses was 27. Fourteen Nurses sat for and passed the Preliminary State Examination of the Nurses' Board for the Gold Coast.

No pupil passed out of the Sanitary Inspectors' Training School, Accra, during the year, as none had completed the 3-year training period.

The results of the examination for the Certificate (West Africa) of the Royal Sanitary Institute, for which ten candidates entered, were not known at the end of the year.

7. *New Buildings*.—A shortage of materials hampered even the most urgent constructional work. The main important progress was at the Nurses' Training College, Korle Bu, and this very impressive block of new buildings was nearing completion at the end of the year. The College is modern in design, stands in extensive grounds, and provides accommodation for some 150 students. The buildings include two well-equipped demonstration rooms, a domestic science room and a science laboratory, large, airy lecture halls and a study library, common rooms, a visitors' room, and up-to-date dining-hall, and dormitories in which a separate well-fitted cubicle is provided for each student.

Plans were still under discussion for the new General Hospital at Kumasi, and for the new Mental Hospital, also to be built at Kumasi.

Progress was made during the year towards completing the School of Hygiene and Sanitation at Accra. The lecture theatre was completed, and additional workshops and offices were in course of construction.

Additional quarters for nursing staff at the Gold Coast Hospital were put in hand but were not finished.

8. *Limb Fitting Centre*.—The scheme to train African Limb makers for the Limb Fitting Centre taken over from the Military Authorities in 1946 had to be abandoned owing to the high cost, and arrangements were made with the Nigerian Government for prostheses to be made at the Limb Fitting Centre, Lagos.

9. *Legislation*.—An Ordinance was passed amending the Lunatic Asylums Ordinance so as to give power (a) to discharge a lunatic to the care of relatives and friends; (b) to enable lunatics, in proper cases, to be temporarily released on trial and (c) to provide for the transfer of a non-native lunatic to his own country.

The Nurses' Ordinance, passed in 1946, came into operation on 1st January, 1947. It established a Nurses' Board with responsibility for regulating training, for laying down standards, and for other measures concerning the nursing profession.

10. *Anti-Malarial Measures and Sanitation*.—Routine anti-mosquito measures were continued. The Korle Lagoon outfall was nearly completed, and is usable in an emergency. The regular use of mepacrine and paludrine appeared to be a main cause of a diminished incidence of malaria amongst Europeans.

Existing standards of general sanitation were well maintained, in spite of shortages of staff, transport and materials. A policy of replacing public pan latrines by septic tanks, especially in the more populous areas, was pursued as rapidly as supplies of labour and equipment would permit. Health problems created by a strike of mines labour in the Tarkwa district from 29th September to 3rd November were dealt with successfully, the Health Department having temporarily taken over anti-malarial and scavenging measures in the areas of two Mining Companies.

11. *Maternity and Child Welfare (vide Table VIII and para. 60)*.—There was a growing tendency for women to regard the routine visit to the ante-natal or child welfare clinic as a pleasant social event, and with mounting attendances, the work at some of these centres became very heavy. Dietary deficiency was a main cause, both of diseases seen in the children and of the anaemia common amongst the mothers after repeated pregnancies; particular attention was therefore given to educating the mothers in the principles of correct feeding. As a result of health teaching the practice of earlier weaning appeared to be spreading. In spite of continued propaganda urging mothers to get the attention of a qualified midwife, large numbers continued to rely on the unqualified woman and to seek skilled help only when a case became difficult. In the larger centres efforts were made to ensure continuity of child care by a closely inter-related system of domiciliary visits, weighing centres and clinical services. At the Princess Marie Louise Clinic in Accra the limitation of in-patients to a maximum of 16 had a beneficial effect, the number of out-patients rose steadily and it was evident that the policy of not having a full-time Medical Officer at the Clinic was working satisfactorily.

12. *British Red Cross Society*.—The Gold Coast Branch of the British Red Cross Society continued to do useful work. The Society donated a station wagon to the Maternity Hospital, Korle Bu, and an ambulance for the use of the Red Cross Clinic at Koforidua. A scheme was approved whereby a few locally-trained African girls would receive training in the United Kingdom to enable them to undertake supervisory duties in Red Cross Clinics as Nurses, Nurse-Midwives and Health Sisters. A full-time Organiser for the Society assumed duty during the year, and his work led to a considerable extension of the Junior Red Cross Movement.

13. *Smallpox*.—Outbreaks of smallpox occurred in widely separated areas in the north, the chief outbreaks being in the neighbourhood of Navrongo. Here the disease was endemic throughout the year in Zuarungu and the eastern part of the Navrongo district, and cases totalled 439, with 79 deaths. Ten Sanitary Inspectors and five Nurses were sent to deal with an outbreak in the Nangodi area in December. In the Bawku area there was an outbreak in the early part of the year, and an epidemic team consisting of one Sanitary Superintendent, two Sanitary Inspectors and two public Vaccinators stayed in the district until May. Cases here totalled 305, with 56 deaths.

In the Keta area an outbreak which had started in the latter part of 1946 lasted up to February, 1947.

Total cases for the whole country were 848, with 173 deaths.

Vigorous preventive measures were employed, and a total of 613,904 vaccinations and re-vaccinations was performed. These included a vaccination drive throughout Ashanti, and over 50,000 vaccinations in the Keta area. The growing public confidence in vaccination was indicated by the fact that many villages sent false reports of smallpox in their district. Local rulers showed great willingness to co-operate with the Department in carrying out mass vaccinations.

14. *Cerebro-spinal Meningitis*.—There was a total of 1,297 cases of cerebro-spinal meningitis with 219 deaths during the year. Of these, 1,023 cases with 175 deaths were distributed widely throughout the Northern Territories, where the disease was especially prevalent during the dry spring months. The chief outbreaks were in the Navrongo district at Sandema, Kandiga and Gbonpologu, in the Tumu, Wa and Lawra areas, and in Bawku and Yendi.

The very close co-ordination of the efforts of the provincial administration, the native authorities and the Medical Department was effective in checking the spread of the disease. There was evidence that the public had become alive to the dangers of cerebro-spinal meningitis and the necessity for early treatment. Relatives generally lost no time in hurrying patients to the nearest medical post. Attendants of infected persons were treated with prophylactic doses.

From April, 1947 until the end of the year cerebro-spinal meningitis was endemic in Accra. Cases in this outbreak totalled 225 and there were 36 deaths. Cases occurred particularly in James Town and Ussher Town, where bad housing and overcrowding favoured the spread of the disease. Nevertheless there was only one instance of more than one case to a compound, and the general tendency was for cases to be widely scattered. Suspects were removed immediately to hospital, and infected compounds were aired and disinfected. By means of radio propaganda, articles in the Press, and personal visits by Sanitary Inspectors, efforts were made to bring home to the public the importance of sunlight, ventilation and hygienic habits as means of checking the spread of this disease.

15. *Yellow Fever*.—No proved case of yellow fever occurred during the year. The number of house-to-house inspections carried out for the prevalence of mosquito larvae totalled 3,659,055.

16. *Tuberculosis*.—The Director and Dr. R. D. Reid, Pathologist, attended the Commonwealth and Empire Health and Tuberculosis Conference which was held in London in July, 1947. The Director read a paper on the subject of Tuberculosis in the Gold Coast.

Dr. K. W. Todd, Research Fellow of the National Association for the Prevention of Tuberculosis, completed an investigation and returned to the United Kingdom. The figures for pulmonary tuberculosis during the year were high (*vide* para. 26). At the Gold Coast Hospital, cases admitted showed an increase of 14 per cent on those for 1946, and there was a death rate of 48 per cent. In the Northern Territories the principal sufferer was, as in previous years, the migrant labourer from the mining areas. In addition to patients who reported at hospitals, and who were usually in a hopeless condition, large numbers were undoubtedly treated by native methods in their own villages. No available official figure could therefore give an accurate indication of the ravages of this disease.

17. *Yaws and Trypanosomiasis*.—The supervision of the campaign against yaws was united with the trypanosomiasis campaign from 1st January, 1947, and financial administration was transferred in April. All workers in the yaws campaign began to receive training in trypanosomiasis work, and *vice versa*.

The mass treatment of yaws continued in the Northern Territories with satisfactory results. Work was resumed in Dagomba district towards the end of the year. A start was made on Ashanti where, to meet the difficulty of shortage of staff, yaws treatment centres were opened. Thanks to the co-operation of Chiefs and patients these centres were very regularly attended. In all, 12 treatment teams were established and a total of 10,857 cases was treated by the campaign during the year.

The campaign against trypanosomiasis made steady progress, and co-operation with the French continued with good results.

On the mass treatment side of the campaign, a survey and mass-treatment of the Krachi district, from the Volta to near the Oti, was begun, following a French complaint of reinfection from this district. A survey of the Wam and Berekum areas was completed during the year, and a survey of the Atebubu-Krachi Road was resumed from 1941. A sample re-survey of Dagomba district was completed early in the year, and was followed by an examination of an area on the western frontier of Dagomba. A move was made to the eastern frontier of Dagomba in November, with the intention that there should be a complete trypanosomiasis re-survey of one region, combined with a yaws re-survey of all Dagomba.

A total of 67,471 cases was examined in the course of trypanosomiasis surveys, and 544 persons were found to be infected. The total number of cases treated by the campaign was 1,178. In the biological control of the disease, the work of selective clearing of fly-belt trees proceeded. In view of the difficulty of eradicating *Mimosa asperata*, a system of uprooting and burning this shrub every third year was introduced, any seedlings of fly-belt trees being dealt with at the same time. The settlement and development of the Kamba Valley went on slowly but satisfactorily. The Medical Entomologist acquired the help of Mr. D. Farr, Reclamation Officer.

Dr. Tooth, Colonial Research Fellow, worked with the campaign during the year, and studied the mental aspect of the disease.

18. *Leprosy*—(*vide* paragraph 28).—Dr. A. McKelvie, Leprosy Officer, took up his appointment in November, and began preliminary investigations into the incidence and distribution of leprosy in the Gold Coast. Mr. J. H. Eldon, Lay Assistant, had arrived from Nigeria in August to help in the administration of the Leper Settlement at Ho. Conditions at the Leprosy Hostel, Labadi, deteriorated during the year with the further weathering away of corrugated iron huts which were already beyond repair. Patients at Labadi, however, continued to refuse to transfer to Ho, despite the discomforts of Labadi and the manifest unsuitability of the site, which is between two housing estates and on an unproductive sandy soil.

The subsistence allowance was increased during the year from 6d. to 1s. 3d. a day, and there was an improvement in the general standard of nutrition.

Settlements at Kumasi and Yendi were used by patients less for curative purposes than as a means merely of avoiding starvation in the later stages of their disease.

19. *Mental Hospital*.—The Mental Hospital was again gravely handicapped by unsuitable accommodation and shortage of staff. Urgent work was, however, begun by the Public Works Department on various improvements and extensions, which included putting drains underground, converting latrines to connect with a complete sewage system, and building a larger kitchen, a laundry with electric geyser, a duty room for nurses and a new mortuary.

Admissions during the year totalled 223—43 fewer than in 1946. There were 121 deaths (nine more than in 1946), a considerable number being due to pulmonary tuberculosis and helminthic diseases. Seventy patients were discharged, as compared with 60 in 1946. The average number of patients in residence, as in the previous year, was usually in the region of 650. The general standard of health was fair.

(II) IMPORTANT DISEASES TREATED DURING THE YEAR

20. *Diseases of the Enteric Group* (1) (*a, b and c*).—Two hundred and ninety-six cases were treated in hospitals during the year. There were 44 deaths. In 1946, 226 cases were treated and there were 26 deaths.

21. *Smallpox* (5).—Eighty-nine cases were treated in hospitals. There were two deaths. In 1946, 377 cases were treated and there was one death.

22. *Diseases of the Dysenteric Group* (12).—Three thousand three hundred and forty-one cases were treated in hospitals. There were 54 deaths. One thousand and twenty-nine of the cases were amoebic in type, with 32 deaths. In 1946, 2,447 cases were treated and there were 52 deaths. Of the cases in 1946, 937 were amoebic, with 31 deaths.

23. *Cerebro-spinal Fever* (16).—Five hundred and seventy-seven cases were treated in hospitals. There were 75 deaths. In 1946, 279 cases were treated and there were 63 deaths.

24. *Rabies* (17).—Three cases were treated in hospitals, and there were three deaths. In 1946 there were five deaths.

25. *Tetanus* (18).—Two hundred and sixty-four cases were treated in hospitals. There were 62 deaths. In 1946, 200 cases were treated and there were 45 deaths.

26. *Tuberculosis of the Respiratory System* (19).—Two thousand four hundred and ninety cases were treated in hospitals. There were 307 deaths. In 1946, 2,017 cases were treated and there were 248 deaths. The figure for 1947 represents 10·8 per cent of all deaths in hospitals from all causes during the year—an increase of 1·0 on the percentage figure for 1946. In the Registration Areas of the Gold Coast pulmonary tuberculosis was responsible for 91 per thousand registered deaths—*vide* Table (II) page 7. The corresponding figure for 1946 was 101.

27. *Other tuberculous diseases* (20).—Five hundred and twenty-six cases of these conditions were treated in hospitals, being 17·4 per cent of cases due to all forms of tuberculosis. There were 44 deaths. In 1946, 317 cases were treated and there were 17 deaths. The cases in 1946 were 13·6 per cent of cases due to all forms of tuberculosis.

28. *Leprosy* (21).—Nine hundred and thirty-three in-patients and 787 out-patients were treated, compared with 892 and 540 during the previous year. At Ho, the principal settlement, there was on 31st December, 1947, a total of 422 patients (266 male, 156 female), compared with 453 at the same date in 1946. Deaths at Ho in 1947 totalled 25, compared with 24 in 1946. Total deaths in 1947 were 37, compared with 41 in 1946.

29. *Venereal diseases* (22).—One thousand six hundred and fifty-seven cases of syphilis were treated in hospitals, an increase of 569 on the previous year's figure, which was itself 437 more than the figure for 1945. There were 16 deaths in 1947, compared with seven in 1946. Gonorrhoea and its complications accounted for 15,085 cases with 18 deaths in 1947, compared with 10,943 cases with 29 deaths in 1946.

It was reported from the Venereal Diseases Clinic of the Gold Coast Hospital that gonorrhoea again accounted for the majority of the patients. New gonorrhoea cases showed an increase of nearly 16 per cent over those in 1946. There was an increase of approximately eleven per cent in cases of primary syphilis. A total of 2,095 cases was treated at the Clinic.

30. *Yellow Fever* (23).—No case of Yellow Fever was reported during 1947.

31. *Malaria* (24).—There was a considerable increase in cases of malaria treated in hospitals in 1947 as compared with 1946. The total for 1947 was 60,258 cases, with 96 deaths, while in 1946 there were 47,861 cases with 91 deaths. The percentage of deaths from this condition to all deaths in hospital in 1947 was 3·3 (compared with 3·6 in 1946), and in all the Registration Areas malaria was responsible for 103 deaths per thousand registered deaths. In 1946 the comparable figure was 85.

32. *Blackwater Fever* (25).—Thirty-four cases were treated in hospitals. There were five deaths. In 1946, 30 cases were treated and there were five deaths.

33. *Trypanosomiasis* (27)—(*vide paragraph 17*).—A total of 3,299 cases was treated in hospitals. There were 60 deaths. In 1946, 3,387 cases were treated and there were 58 deaths.

34. *Yaws* (28)—(*vide paragraph 17*).—A total of 144,441 cases was treated in hospitals. There were three deaths. In 1946, 133,876 cases were treated, and there were four deaths.

35. *Helminthic Diseases* (30, 31, 32).—A total of 15,122 cases was treated in hospitals. There were 47 deaths. The chief infections were ankylostomiasis (3,345 cases with 21 deaths) and schistosomiasis (3,088 cases with 16 deaths). The corresponding figures for 1946 were: total cases, 12,571 with 66 deaths; ankylostomiasis 4,414 cases with 43 deaths; schistosomiasis, 2,093 cases with 10 deaths.

36. *Human Anthrax* (33).—A small outbreak of human anthrax occurred in the Tarkwa district in December, 1947. The source of infection was a bullock found dead and cut up for food. There was an interval of about 14 days between exposure to infection and onset of symptoms. Cases totalled ten, of which three were fatal. Treatment by penicillin produced a quick recovery. Two deaths from human anthrax were reported from Accra during the year. No local focus of infection was reported.

37. *Cancer and other tumours* (34).—There were 192 malignant tumours seen in hospitals, with 24 recorded deaths, and 863 non-malignant tumours, with four recorded deaths. In 1946 the figures were 179 malignant tumours with 19 recorded deaths, and 645 non-malignant tumours with nine recorded deaths.

38. *Rheumatic conditions* (35).—One case of rheumatic fever was reported, and no death. Other rheumatic conditions accounted for 14,727 cases and two deaths. In 1946, 70 cases of rheumatic fever were reported, with no death; and there were 18,385 cases of other rheumatic conditions, with three deaths.

39. *Nutritional Diseases* (37, 38, 39 and 40a).—(*vide* para. 54)

TABLE I

	1946		1947		Increase in Cases
	Cases	Deaths	Cases	Deaths	
Scurvy (37)	15	2	26	1	11
Beriberi (38)	12	2	76	3	64
Pellagra (39)	75	6	315	8	240
Other nutritional diseases (40a) ...	1,845	69	2,325	43	480
Total	1,947	79	2,742	55	795

The continued increase in the numbers of nutritional diseases notified is due largely to an increasing awareness and knowledge and not to a real increase in the numbers of such cases.

40. *Affections of the respiratory system* (49, 50 and 51).—Bronchitis accounted for 25,143 cases with 20 deaths, compared with 18,537 cases and 16 deaths in 1946. Broncho-pneumonia accounted for 1,051 cases with 100 deaths, compared with 888 cases and 96 deaths in 1946. Lobar pneumonia accounted for 1,627 cases with 90 deaths, compared with 1,492 cases and 61 deaths in 1946. Undefined pneumonia accounted for 1,069 cases with 39 deaths, compared with 743 cases and 31 deaths in 1946. Total pneumonia cases for 1947 were 3,747, with 229 deaths. The total for 1946 was 3,123 cases, with 188 deaths.

41. *Nephritis (all forms)* (58).—Seven hundred and ten cases were treated in hospitals. There were 34 deaths. In 1946, 720 cases were treated, and there were 55 deaths.

42. *Pregnancy, Childbirth, etc.* (60).—A total of 53,585 cases was recorded, with 306 deaths. In 1946, the total was 39,049 cases with 233 deaths. (*Vide* Table VIII).

(III) VITAL STATISTICS

43. (No census had been taken since 1931. An official census was due to be taken in February, 1948).

(i) GENERAL POPULATION

TABLE II

	1947	
		Total number registered
Total estimated population	3,962,692	
Estimated population of Registration Areas	355,780	
*Birth-rate per 1,000 persons living	39.7	14,714
*Death-rate per 1,000 persons living	27.4	10,224
Infantile mortality rate	117	1,728
Stillbirth-rate per 1,000 total births	73	1,067
Maternal mortality per 1,000 total births	19.2	303
Deaths from respiratory diseases per 1,000 deaths registered	118	1,209
Deaths from pulmonary tuberculosis per 1,000 deaths registered	91	927
Deaths from intestinal diseases per 1,000 deaths registered	75	766
Deaths from malaria per 1,000 deaths registered	103	1,051
Deaths due to starvation	24	—

*Weighted average.

44. The following tables compare mortality and birth rates recorded for 1947 with those recorded for 1946 :—

TABLE III

DECREASES

	1946	1947
Deaths from pulmonary tuberculosis per 1,000 deaths registered	101	91
Deaths due to starvation	40	24

TABLE IV

INCREASES

	1946	1947
Death-rate per 1,000 persons living	25·5	27·4
Infantile mortality rate	110	117
Stillbirth-rate per 1,000 total births	68	73
Maternal mortality rate per 1,000 total births	17	19·2
Deaths from respiratory diseases per 1,000 deaths registered	117	118
Deaths from intestinal diseases per 1,000 deaths registered	59	75
Deaths from malaria per 1,000 deaths registered	85	103

(ii) GENERAL EUROPEAN POPULATION

TABLE V

	Official	Non-official	Total
Number of Europeans resident	962	3,794	4,756
Number invalided	29	43	72
Number of Deaths	6	11	17

45. Compared with 1946, the number of resident Europeans rose by 708, while the invalidings dropped by 18 to 72. The number of deaths rose from 12 to 17.

46. The causes of invalidings of European officials were : indifferent health and mental depression 11 ; malaria 2 ; paratyphoid 2 ; duodenal and gastric ulcers 2 ; headaches 2 ; and single instances of amoebic dysentery, pain over semilunar cartilage, enteritis, bilateral colles fracture, discomfort in the epigastrium, injury to knee, hypertension, sciatica, varicocele and bronchial asthma.

47. The causes of deaths of European officials were : broncho-pneumonia 1 ; cerebral malaria 1 ; acute poliomyelitis 1 ; shock and haemorrhage following gunshot wound 1 ; haemorrhage following crush of leg 1 ; drowning 1.

48. The causes of invalidings of non-official Europeans were : indifferent health and mental depression 13 ; diseases of the heart 4 ; amoebic dysentery 3 ; malaria 2 ; duodenal and gastric ulcers 2 ; pyelitis 2 ; pneumonia 2 ; dermatitis 2 ; single instances of blackwater fever, haematuria, chronic alcoholism, pulmonary tuberculosis, pleurisy, silicosis, bronchial asthma, tumour of the lung, osteitis, sciatica, and tropical anaemia ; unknown 2.

49. The causes of deaths of non-official Europeans were : blackwater fever 2 ; prematurity 2 ; acute poliomyelitis 1 ; acute appendicitis and paralytic ileus 1 ; traumatic asphyxia 1 ; acute alcoholism 1 ; drowning 1 ; ruptured gastric ulcer 1 ; cerebral malaria 1.

TABLE VI

NON-OFFICIAL EUROPEANS

	Number	Invalided	Died
Merchants	1,094	14	3
Missionaries, Males	256	4	—
Missionaries, Females	164	3	—
Mining Community	1,122	20	5
Women (non-official)	897	2	1
Children (general)	261	—	2
Total	3,794	43	11

(iii) OFFICIAL AFRICAN POPULATION

TABLE VII

	Number resident	Number invalided	Number of deaths
	6,983	43	25

50. The number of resident African officials rose from 6,286 to 6,983. The number of invalidings dropped from 45 to 43 and deaths rose from 18 to 25.

51. The causes of invalidings of African officials were : hypertension 4 ; pulmonary tuberculosis 4 ; anxiety states 3 ; neurosyphilis 2 ; toxic amblyopia 2 ; defective vision 2 ; retrobulbar neuritis 2 ; diabetes 2 ; and single instances of macular degeneration, optic atrophy, chronic malaria, spinal caries, tachycardia and sickle cell anaemia, chronic alcoholism, chronic nephritis, schizophrenia, old age, leprosy, tenosynovitis, disability resulting from fracture, osteo-arthritis, auricular fibrillation, aortic incompetence, angina pectoris, cerebral thrombosis, psychosis, oedema of ankle, urinary fistula, chronic ulcer, asthma.

52. The causes of deaths of African officials were : typhoid fever 4 ; peritonitis 3 ; cerebral haemorrhage 2 ; shock and haemorrhage 2 ; pulmonary tuberculosis 2 ; liver abscess 1 ; pneumonia 1 ; cardiac failure 1 ; pneumococcal meningitis 1 ; injury to brain 1 ; chronic nephritis 1 ; diabetes 1 ; dehydration following gastritis 1 ; anaemia 1 ; strangulated hernia 1 ; drowning 1 ; toxæmia due to chronic ulcer 1.

(IV) HYGIENE AND SANITATION

53. *Housing*.—With the continuing lack of building materials, an acute shortage of houses persisted, with its resultant evils of overcrowding and high rents, particularly in the larger areas. In Accra, though there was little progress in reducing the density of population in James Town and Ussher Town, there was considerable building of the better class of house, in spite of delay in the installation of running water supplies owing to lack of plumbing equipment. Substantial progress was made with building schemes in Cape Coast. In the Tarkwa district, conditions in the worst of the mining villages remained very bad, but Mining Companies were in process of constructing new compound villages. The plans of the Department of Social Welfare and Housing for a new housing estate in Tarkwa promised to relieve conditions at Aboso, where overcrowding continued to be particularly bad.

54. *Food in relation to Health and Disease*.—Though gross malnutrition was not common anywhere in the country, there was undoubtedly some hunger in the North, particularly in the east and south-east Tumu districts ; and amongst the population as a whole there were many indications of nutritional deficiency. The chief sufferers were children, migrant labourers and expectant mothers.

Certainly many workers tended to be somewhat better fed as a result of the Korsah and other awards, but the effect of these awards was partly offset by a sharp rise in the cost of living. This was particularly marked in the prices of local foodstuffs. ●

A shortage of protein continued to be a main cause of dietary deficiency, particularly in those parts of the North where fresh fish was unknown. Even in the South, where fish was plentiful, its very high cost placed it well beyond the reach of many. Vegetables and meat were both scarce and expensive in many districts. Though prices of tinned fish and tinned meat were high, there was no widespread shortage of these commodities, and some malnutrition in the larger centres was due more to ignorance than scarcity.

Canteen feeding in the Mines came to an end, following complaints made before the Arbitration Tribunal at the time of the Mines strike.

Canteen and institutional diets were the subjects of an investigation by the Department during the year, and the following circulars were in course of preparation : “ Advice and Suggestions for the Supplementary Feeding of Labour ”, “ Advice and Suggestions for the Feeding of School Children ” and “ Hospitals Diets Directive ”.

55. *Mosquito Control*.—The control of domestic breeding proceeded as previously. In the course of 1947 a total of some 3,659,055 house and compound inspections was made. On 9,932 occasions mosquito breeding was found, yielding a larval index of 0·27 per cent.

56. *School Hygiene*.—Sick school children continued to be referred to district hospitals, and District Medical Officers carried out inspections of schools in their districts. Plans were made for a School Medical Service to start in Accra in 1948.

57. *Prisons*.—Overcrowding of central prisons presented a problem throughout 1947, and in some local prisons also there was overcrowding at certain seasons. In spite of an increase in the numbers of prisoners, the percentage reporting sick showed no increase.

The nursing service at the Accra prisons was reorganised, and plans were made to erect a new hospital ward. An epidemic of chickenpox was brought into the Accra prison by a gang of deportees. Chickenpox also caused the temporary closing of Tarkwa prison.

The practice was begun of serving fruit twice weekly in the prisons. The majority of prisoners showed an increase of weight soon after admission. At Bawku, where there was some evidence of loss of weight, the prison diet was investigated, a deficiency of Vitamin A was suspected, and steps were taken to adjust the diet by the addition of groundnut oil and carotenoids in the form of mixed vegetables.

58. *Vaccinations*.—During 1947 a total of 613,904 vaccinations and re-vaccinations against smallpox was carried out. Of this total 273,361 persons were examined and gave a positive rate of 82·35 per cent. The corresponding figures for 1946 were : total vaccinations and re-vaccinations, 594,341 ; examinations, 274,525 ; positive rate, 88·78 per cent.

II—SPECIAL SERVICES

(V) PORT HEALTH AND AIR TRAFFIC

59. No port or airport was declared infected during the year. At Takoradi Airport the Department took over sanitary and anti-malarial control from the Royal Air Force on 1st August, 1947.

Takoradi ceased to be a terminal airport, leaving Accra as the only terminal airport in the country.

(VI) MATERNITY AND CHILD WELFARE

(Vide para. 11).

TABLE VIII

Types of Centre	Attendances	
	Children	Expectant Mothers
Government Centres	51,284	38,771
Red Cross Centres	45,885	41,318
Mission Centres	97,609	4,922
Total	194,778	85,011

60. In 1946 the total attendances were 168,903 children and 72,912 expectant mothers.

In addition to the above, there were 97,815 attendances at weighing clinics. This latter figure represents a considerable reduction on the corresponding figure of 129,305 for 1946, but an examination of records for the war years shows very considerable fluctuation with a tendency to diminish steadily in the Kumasi area. An enquiry is being made into the reasons.

(VII) HOSPITALS, DISPENSARIES, LABORATORIES

61. A total of 43,483 in-patients was treated in hospitals during the year (*vide* Return A of this Report). This figure represented an increase of 5,355 on the total for 1946.

The total number of deaths in hospitals in 1947 was 2,848 ; that is, approximately 6·5 percent of the total number of in-patients treated. In 1946 the percentage was 6·9 and in 1945 it was 7.

The number of out-patients also increased considerably, and the total for 1947 was 570,280 as compared with 475,571 in the previous year.

Radiographic examinations at the Gold Coast Hospital totalled 4,816 (compared with 3,571 in 1946) and X-ray and electro-therapeutic treatment totalled 4,468 (compared with 2,308 in 1946). At Kumasi there were 1,273 X-ray examinations in 1947 (compared with 701 in 1946).

At the Eye Clinic of the Gold Coast Hospital there was a total of 15,386 attendances. At the Kumasi Eye Clinic, in spite of a very great accommodation problem, a total of 8,819 out-patients and 75 in-patients was treated in eight months, the surgical cases numbering 230.

In spite of such growing demands upon hospital services, no major new constructional work could be undertaken during the year (*vide* para. 7), and the strain upon existing accommodation was very heavy indeed.

Tenders were received for the new 60-bedded hospital which is to be built at Bolgatanga in the Northern Territories, and a site was selected for a 40-bedded hospital at Hohoe. Plans were passed for a new maternity ward and a new female ward at Akuse, and plans were submitted for extensions to the hospital at Oda, the new buildings to comprise a male ward, a small ward for officials and a theatre.

62. A new dispensary in the hospital grounds at Axim was nearing completion at the end of the year. The three travelling dispensaries, for use in sparsely populated areas, were in course of preparation.

63. The laboratories of the Medical Research Institute carried out 28,305 bacteriological, pathological and chemical examinations. The total for the preceding year was 21,345. The total number of post-mortem examinations carried out by the Institute in 1947 was 314, as compared with 286 in 1946.

The work of the Chemical Laboratory also increased, with a total of 1,965 samples examined in 1947, as compared with 1,397 in 1946. The number of samples of all kinds received from the Customs Department during the year under review (1,741), was the highest in the history of the Laboratory.

From Kumasi Laboratory also a sharp increase of work was reported, with 17,916 examinations in 1947 as compared with 9,654 in 1946. A total of 15,913 laboratory examinations was made at Sekondi, and 5,945 at Cape Coast.

(VIII) TRAINING OF MEDICAL AND HEALTH PERSONNEL

(For details of scholarship awards and examination results, *see* para. 6 of this Report.)

64. The Gold Coast Hospital continued to play a major part in the training of dispensers and nurses for the Colony.

The School of Pharmacy was attended by 52 pupil dispensers, of whom eight passed the Druggists' Examination, one obtaining a Nuffield Scholarship to the United Kingdom. Nine of the pupils at the School were ex-Servicemen.

After a test period at the Hospital, 47 ex-Army Orderlies obtained appointments as pupil nurses or ward attendants. The number of female candidates accepted as pupil nurses was 22.

The new College buildings at Korle Bu not having been completed (*vide* para. 7), the Nurses' Training College continued at Kumasi throughout the year. Of the nurses in training at Kumasi, four were in their final year, 14 in their second and 21 in their first year. In addition, there were 37 pupils in the

Pre-nursing course attached to Achimota School. To judge from the low educational standard of most of the girls at present coming forward for training in nursing, the pre-nursing course, which is a general educational course, will continue to be necessary for a few more years.

Fifty Pupil Sanitary Inspectors, 42 of whom were ex-Servicemen, were at the School of Hygiene and Sanitation, Accra, during the year. During the absence of the Training Officer on leave in the latter part of the year, the pupils were employed on whole-time practical work in Accra and at the airport. A six weeks' revision course was held during July and August for candidates for the Examination of the Royal Sanitary Institute.

Early in the year arrangements were made whereby Native Administration dressers from the Northern Territories would, after nine months in hospital, receive nine months training from Dr. Saunders at Kitampo. The training includes instruction in the systematic treatment of yaws and trypanosomiasis, field sterilization and home nursing.

A number of ex-soldiers, some with valuable experience in the Royal Army Medical Corps, were employed in the campaigns against yaws and trypanosomiasis, and many did excellent work.

III—FINANCE

Branch	EXPENDITURE FOR THE PERIOD 1ST JANUARY, 1947 TO 31ST DECEMBER, 1947		Total
	Ordinary	Extraordinary	
	£ s. d.	£ s. d.	£ s. d.
A. Medical and General	337,077 3 1	2,998 12 5	340,075 15 6
B. Health Branch	217,346 3 8	21,024 5 1	238,370 8 9
C. Laboratory	9,360 14 6	—	9,360 14 6
D. Nurses' Training School, etc.	8,543 19 0	—	8,543 19 0
Total	£572,328 0 3	£24,022 17 6	£596,350 17 9
Total Gold Coast Expenditure	£7,956,114 10 9	£1,036,728 12 0	£8,992,843 2 9
Percentage of total to total for the Gold Coast for the period January to December, 1947	7.2 %	2.4 %	6.6 %

RETURN B

RETURN OF GOVERNMENT HOSPITALS, 1947

Number of Government Hospitals with Medical Officers	25
Number of Government Hospitals without Medical Officers (due to shortage)	8
Total of Government Hospitals	33

RETURN C

RETURN OF BEDS AND COTS FOR 1947

Beds	1,406
Cots	204

J. G. S. TURNER
Director of Medical Services.

MEDICAL DEPARTMENT,
ACCRA,
25th June, 1948.

RETURN A

Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the year 1947

Diseases		IN-PATIENTS						OUT-PATIENTS		
		Remaining in hospital on 31st Dec., 1946	Yearly Total				Total cases treated	Remaining in hospital on 31st Dec., 1947	Males	Females
			Admissions		Deaths					
			Males	Females	Males	Females				
1.	(a) Typhoid fever	9	127	58	31	10	194	15	46	23
	(b) Paratyphoid fever	2	11	3	1	1	16	—	4	1
	(c) Type not defined	—	3	3	—	1	6	—	2	4
2.	Typhus fever	—	2	—	—	—	2	—	—	—
3.	Relapsing fever	—	1	—	—	—	1	—	—	—
4.	Undulant fever	—	—	1	—	—	1	—	—	1
5.	Small-pox	5	20	4	1	1	29	1	33	27
6.	Measles	2	78	39	2	—	119	—	531	423
7.	Scarlet fever	—	—	—	—	—	—	—	—	1
8.	Hooping Cough	—	33	19	—	—	52	1	1,030	1,055
9.	Diphtheria	—	—	1	—	—	1	—	2	6
10.	Influenza—									
	(a) with respiratory complications	1	17	6	2	—	24	1	23	17
	(b) without respiratory complica- tions	—	20	6	1	—	26	—	155	83
11.	Cholera	—	—	—	—	—	—	—	—	—
12.	Dysentery—									
	(a) Amoebic	20	332	111	25	7	463	12	354	212
	(b) Bacillary	3	261	103	9	8	367	3	142	109
	(c) Unclassified	2	93	35	4	1	130	—	963	601
13.	Plague—									
	(a) Bubonic	—	—	—	—	—	—	—	—	—
	(b) Pneumonic	—	—	—	—	—	—	—	—	—
	(c) Septicæmic	—	—	—	—	—	—	—	—	—
14.	Acute poliomyelitis	—	9	9	2	1	18	—	14	6
15.	Encephalitis lethargica	—	4	—	4	—	4	—	2	—
16.	Cerebro-spinal fever	—	225	103	52	23	328	5	134	115
17.	Rabies	—	3	—	3	—	3	—	—	—
18.	Tetanus	2	80	52	41	21	134	6	80	50
19.	Tuberculosis of the respiratory system	52	680	129	271	36	861	38	1,215	414
20.	Other tuberculous diseases	18	117	44	31	13	179	14	258	89
21.	Leprosy	642	196	95	26	11	933	606	521	266
22.	Venereal diseases —									
	(a) Syphilis	9	175	24	15	1	208	4	1,106	343
	(b) Gonorrhœa, complications and sequela	46	1,855	509	16	2	2,410	79	10,227	2,448
	(c) Other V. D.	11	276	46	—	1	333	7	1,609	377
23.	Yellow fever	—	—	—	—	—	—	—	—	—
24.	Malaria—									
	(a) Benign tertian	7	79	18	8	—	104	2	272	194
	(b) Subtertian	21	914	325	17	13	1,260	19	4,697	2,429
	(c) Quartan	—	12	14	3	1	26	—	236	3
	(d) Unclassified	30	1,508	745	29	25	2,283	50	2,963	18,791
25.	Blackwater fever	—	16	8	2	3	24	—	6	4
26.	Kala-azar	—	—	—	—	—	—	—	—	—
27.	Trypanosomiasis	130	522	205	47	13	857	98	1,610	832
28.	Yaws	21	151	54	2	1	226	8	81,302	62,913
29.	Other protozoal diseases	—	4	—	—	—	4	—	507	468
30.	Ankylostomiasis	11	481	136	18	3	628	10	1,922	795
31.	Schistosomiasis	11	274	59	15	1	344	6	2,019	725
32.	Other helminthic diseases	9	412	176	7	3	597	8	5,265	2,827
33.	Other infectious and/or parasitic diseases	7	363	70	21	9	440	13	1,638	971
34.	Cancer and other tumours—									
	(a) Malignant	2	45	45	14	10	92	2	51	49
	(b) Non-malignant	3	86	173	—	4	262	8	405	196
	(c) Undetermined	2	18	16	1	1	36	1	137	85
35.	Rheumatic conditions—									
	(a) Rheumatic fever	1	—	—	—	—	1	—	—	—
	(b) Other rheumatic conditions	9	109	49	1	1	167	4	9,338	5,222
36.	Diabetes	3	30	14	2	—	47	3	76	27
37.	Scurvy	—	3	2	1	—	5	—	13	8
38.	Beriberi	—	12	3	3	—	15	—	47	14
39.	Pellagra	1	47	39	5	3	87	—	116	112
40.	Other diseases—									
	(a) Nutritional	16	124	79	29	14	219	9	1,230	876
	(b) Endocrine glands and general	6	83	63	4	—	152	3	418	427
41.	Diseases of the blood and blood- forming organs	37	314	178	70	26	529	36	1,535	1,245
42.	Acute and chronic poisoning	1	53	24	5	1	78	2	121	57
43.	Cerebral hæmorrhage	—	44	11	34	6	55	—	24	16
44.	Other diseases of the nervous system	25	356	147	78	22	528	30	2,163	1,079
45.	Trachoma	—	19	39	—	—	58	1	59	99
46.	Other diseases of the eye and annexe	32	627	458	2	4	1,117	48	11,515	6,770
47.	Diseases of the ear and mastoid sinus	4	141	50	1	—	195	3	5,258	2,891

RETURN A—*contd.*

Return of Diseases and Deaths (In-patients) and Diseases (Out-patients) for the year 1947

Diseases		IN-PATIENTS						OUT-PATIENTS			
		Remaining in hospital on 31st Dec., 1946	Yearly Total				Total cases treated	Remaining in hospital on 31st Dec., 1947	Males	Females	
			Admissions		Deaths						
			Males	Females	Males	Females					
48.	Diseases of the circulatory system—										
	(a) Heart diseases	20	236	88	93	21	344	11	505	314	
	(b) Other circulatory diseases ...	3	103	47	23	15	153	8	329	183	
49.	Bronchitis	14	351	117	16	4	482	13	15,666	8,995	
50.	Pneumonia—										
	(a) Broncho-pneumonia	9	269	157	68	32	435	12	357	259	
	(b) Lobar-pneumonia	46	600	232	66	24	878	13	488	261	
	(c) Otherwise defined	8	235	69	31	8	312	18	496	261	
51.	Other diseases of the respiratory system	14	404	131	30	6	549	14	4,260	1,823	
52.	Diarrhoea and enteritis—										
	(a) Under 2 years of age	—	59	57	10	8	116	8	2,971	2,454	
	(b) Over 2 years of age	7	354	150	19	12	511	13	5,896	2,967	
53.	Appendicitis	18	45	35	6	2	98	3	41	17	
54.	Hernia, intestinal obstruction ...	17	1,087	54	59	11	1,158	31	2,049	125	
55.	Cirrhosis of the liver	5	66	19	20	6	90	3	71	23	
56.	Other diseases of the liver and biliary passages	3	177	82	36	5	262	7	435	192	
57.	Other diseases of the digestive system	30	753	323	63	13	1,106	39	22,355	11,328	
58.	Nephritis (all forms)—										
	(a) Acute	—	44	22	5	3	66	3	181	102	
	(b) Chronic	2	71	38	21	5	111	9	173	77	
59.	Other non-venereal diseases of the genito-urinary system	48	962	766	34	19	1,776	49	3,949	5,543	
60.	Pregnancy, child-birth, and the puerperal state (including normal labour and maternal welfare) ...	103	—	3,900	—	214	4,003	121	—	46,848	
	(a) Abortion	17	—	738	—	2	755	8	—	743	
	(b) Ectopic gestation	2	—	55	—	10	57	1	—	17	
	(c) Toxæmias of pregnancy	1	—	43	—	6	44	—	—	10	
	(f) Other conditions of the puerperal state	76	—	481	—	74	557	12	—	551	
61.	Diseases of the skin, cellular tissue, bones and organs of locomotion	220	4,309	1,653	120	41	6,182	315	56,775	31,836	
62.	Congenital malformations and dis- eases of early infancy (including infant welfare)	13	87	83	28	20	183	—	1,016	944	
	(a) Congenital debility (children under 1 year)	—	82	72	18	18	154	1	84	125	
	(b) Premature birth (children under 1 year)	17	10	46	5	19	73	—	34	29	
	(c) Injury at birth (children under 1 year)	—	2	4	—	—	6	—	10	8	
63.	Senility	10	30	5	11	2	45	4	157	113	
64.	External causes—										
	(a) Suicide	—	7	—	7	—	7	—	8	—	
	(b) Other forms of violence	137	3,348	825	128	32	4,310	161	18,484	4,397	
65.	Ill-defined	58	793	531	30	11	1,382	44	9,856	5,898	
Total		2,111	25,949	15,423	1,903	945	43,483	2,068	327,040	243,240	

